

ABSTRACT OF DISCLOSURE

An apparatus and a method to accurately generate a bit clock synchronized with digital data. The apparatus includes an edge detecting unit, a first edge counter, a second edge counter, a first counter, and a bit clock generating unit. The edge detecting unit detects edges of the digital signal. The first edge counter counts a number of the detected edges during a first period. The second edge counter counts the number of the detected edges during a second period. The first counter is reset and counts a system clock if one of the edges is detected during the first period. The bit clock generating unit generates a bit clock based on a count value of the first counter or a channel bit interval, if one of the first edge count value and the second edge count value is equal to a first predetermined value.